

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### New England Castings

#### Maine Manufacturing Extension Partnership

#### New England Castings Mold a Leaner Environment

##### Client Profile:

New England Castings is an investment casting foundry, located in Hiram, Maine. The foundry specializes in the production of fractional pound castings too intricate or difficult to fill by most conventional shell investment casting shops. Their standard capabilities range from fractional ounces to approximately 30 pound castings in a work envelope of 12" x 12" x 15". They use only environmentally friendly, water-based slurries in the production of their shells and have done so since the founding of the company in 1985. New England Castings is a federally certified Small Business Concern and HubZone certified company. This certification was made final on September 27, 2002 and allows the company to be more competitive in the government contracting sector. The company employs 20 people.

##### Situation:

New England Castings was planning an expansion of 3,000 square feet to their current facility of 9,000 square feet. Before starting on that expansion, management wanted to be sure they were using the current space as efficiently as possible. The Foundry area was disorganized to the point that it was very time consuming to get to the metals to be used each day. The Finishing area was being used as a storage area, and employees were doing an excessive amount of walking to perform many of their required tasks. The management could simply have done a cleanup in the areas but decided it was best to learn some Lean principles before starting on that journey. New England Castings contacted the Maine Manufacturing Extension Partnership (Maine MEP), a NIST MEP network affiliate, for assistance.

##### Solution:

New England Castings shut the entire operation down for one full day so that all 13 employees could participate in Maine MEP's Time Wise 101, Principles of Lean Manufacturing workshop. This would allow everyone to understand the concepts behind Lean Manufacturing. Following the Time Wise 101, New England Castings asked Maine MEP back to facilitate two 5S kaizen events. The first was in the Finishing area and the second was in the Foundry area. The Kaizen Event in the Foundry was focused on organizing and labeling the materials in the area in order to save 20 percent of the time spent looking for materials, and to gain back 50 percent of the usable space. The Kaizen Event in the Finishing area focused on reducing walking distance by 40 percent, reducing equipment setup time by 15 percent and gaining 50 percent of the space back so it could be used for manufacturing processes.

##### Results:

- \* Regained over 50 percent of floor space in Foundry area.
- \* Saved 8.5 weeks of employee time by rearranging metal inventory and labeling storage locations and barrels, setting up point of use storage for tools, and labeling a permanent storage area for common

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cleaning tools and hand dolly.

- \* Reduced inventory by selling metal no longer in use.
- \* Cleaned and reclaimed 50 percent of the 1,600 square foot space in the Finishing area.
- \* Eliminated 4,000 feet of travel per day.
- \* Purchased new tooling and set up shadow boxes for a quick visual inventory of cleaning tools.
- \* Saved 2 weeks of employee time per year.
- \* Accepted \$500,000 contract.
- \* Increased sales by 100 percent.
- \* Delayed construction of 3,000 square foot expansion.
- \* Hired 13 new employees.

### **Testimonial:**

"As a direct result of our Lean manufacturing initiatives, we have been able to avoid the need for facilities expansion while increasing our sales by 100 percent, reducing our work in process by 25 percent and adding 13 new employees to the payroll."

Walter Butler, President